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ART. IV. — *Manuel du Graveur, ou Traité Complet de l'Art de la Gravure en tous Genres, d'après les Enseignemens fournis par plusieurs Artistes, et rédigé par A. M. PERROT, Membre de l'Athénée des Arts, de la Société Philotechnique, de celle de Géographie, de la Société d'Agronomie Pratique, etc. Paris. 1830. 12mo. pp. 255.*

It is nearly four centuries since the art of Engraving was discovered, and a steady improvement may be discerned from that time up to the present day. The nineteenth century is rich in the productions of this beautiful branch of the fine arts. From every civilized land volumes are annually poured forth, illustrated and adorned in a manner which does indeed make antiquity appear rude. Men of genius are devoting themselves to the practice of the art, and do not disdain to perpetuate and spread over the world, by the burine, the inspired design which their pencil has traced. The noble works of the great masters are now no longer the exclusive property of a single spot, or a few individuals. They are given to the world, literally published for the benefit of society, and sent abroad into every land, to delight the taste and to inspire the genius of all nations.

The art of engraving is not, indeed, to be ranked on a level with that of painting. The conception of a piece, the sentiment, moral, or event to be represented, the grouping of the figures, the imagination of forms and countenances, all that belongs to creative power, is displayed in the original design. But still there is left a work for the engraver, demanding a high order of talent. How laborious, delicate, and minute is his labor; how fine, how almost imperceptible, are the millions of strokes, to which the finest hair seems coarse; how infinite the gradation from the deep and dark shadows to the delicate touch, on which the ink is to be laid so sparingly that the black shall literally appear white! And yet how bold and decided must his touch be; life, and even a glow of fire, all the varied expressions of the "human face divine," all the spirit that can light up the most gorgeous painting, must be transmitted through the graver. And more than this. The engraver is often called upon to improve upon his copy; to give, perhaps, to the rude, hard

outline of ancient and imperfect drawing the roundness, grace, and fire of life ; to supply strength and boldness, to give dignity and sentiment, to inspire the quaintness of ancient art with the grace of a better period, and at the same time to preserve the Gothic and sublime simplicity of the original. In addition to this, in most of the copies which engravers are called upon to make, they are obliged to diminish very greatly the size of the piece. And, in doing this, they must not only give a much greater degree of delicacy to the work, and devote much more time to minute detail, but they must carefully preserve the original proportions of the piece.

Finally, the engraver must, merely by the management of his lines, convey, in some degree at least, the idea of color. For engraving seems, in this respect, to be the point of meeting between painting and sculpture. It does not exclude the idea of color, like statuary, which consults form alone. It does not, like painting, give the detail of color. Yet it must convey the notion of different hues, because otherwise no small portion of its purposes would be unfilled. The variety of subjects is much greater for engraving than for sculpture. It is intended to represent familiar and domestic scenes. It is not confined to austere and dignified representations. It enters into every sphere of life, every occupation, from the splendid dramas of the palace and the gorgeous array of the church, to the interior of the hovel, the ale-house, and the stable. To exclude the idea of color from such representations would destroy the effect. Yet this can be conveyed in engravings only by implication or suggestion ; by so managing the width and direction of the lines, that we suppose one color to be represented in one place, another in another place, and so on. This power of the art is remarkably displayed in engravings of landscapes, in which the various hues of nature may be readily suggested to the imagination. All the varieties of foliage, even blossoms and flowers, the clear stream or lake reflecting the heavens, the gleam of the parting sun upon the waters, even the gorgeous drapery of the sunset sky, may be pictured by this charming art.

In speaking of the power of engraving, we must not omit to notice its beautiful adaptation to imitate that most difficult branch of painting, the representation of flesh-color. Here engraving seems to achieve its highest triumph. Every

variety of the appearance of flesh, the beautiful smoothness and delicacy of youth, the rough and wrinkled look of age, the hard and weather-worn visage of the seaman, the bright glow of childhood, and the softness of infancy, may be all conveyed by the engraver with scarcely less distinctness than in the finished painting.

Another very important and difficult office of the art is to convey, in the copies from paintings, a correct idea of the style of each great master ; for the capacities of the art undoubtedly are sufficient for this purpose. In effecting this important object, it is obvious, that the engraver must be more than a mere copyist. It is not enough to imitate the outline and the shading, to preserve on a smaller scale the just proportions of the original, to convey a notion of the coloring, to give the same expression to countenances, and the same finish to all the detail. A higher order of talent is required in the engraver. He must be able to comprehend and appreciate the genius of the master, whose work is before him. He must understand the feelings which inspired him at the moment when he was pouring out his soul upon the canvass. He must know the enthusiasm that stirred him up, the profound sentiment that filled his heart, the devotion, piety, and ardor, with which he applied himself to the work. He must catch a spark of that heavenly flame, which burned in the soul of the great artist, and kindled into life the portraiture upon his canvass. In this way alone can he give to his work that nameless and ethereal charm, which, more than any thing else, distinguishes the works of genius.

These are some of the leading characteristics of the art of engraving ; an art, which we consider perfect in its kind, that is, accomplishing all the objects which it professes to undertake, as completely as any of the fine arts. The editor of Horace Walpole's "*Catalogue of Engravers*" remarks, that "want of coloring is the capital deficiency of prints." But we think he is entirely mistaken in this respect. Engravings, as we have endeavoured to show, do possess the property of coloring by suggestion, and this is one of the distinguishing beauties of the art. To color a fine engraving, which is fully finished with all the depth and variety of shading, seems to us little less barbarous than to paint a fine statue.

Though wood engraving is very different from copperplate, it seems worth while to notice it in treating of this sub-

ject, as it has recently become an object of considerable attention, and has undergone great improvement. Wood engraving is much like printing, the figures being raised from the surface like those on printers' types. In this respect, it is exactly opposite to engraving on copper or steel, and it was in use a considerable time before the process of taking impressions from copper plates was discovered. It has been asserted, that a series of drawings, representing the exploits of Alexander, were designed and executed in wood by Alessandro Cunio and his twin sister, in the latter part of the thirteenth century. But this has been disputed. It is certain, however, that the art was practised a few years later, as there is a print from a wood-cut in the possession of Earl Spencer, representing St. Christopher, and bearing the date of 1423.

The discovery of the art of engraving on metal, for the purpose of making impressions on paper, is generally ascribed to Finiguerra, a goldsmith of Florence. He excelled in an art, then much practised in Florence, called *niello*. It was the custom with jewellers, in those times, to engrave the outlines of Scripture subjects upon the vessels which they made for the use of the church. When this engraving was completed, they filled the lines with a black substance composed of a mixture of lead and silver, in solution with borax and sulphur; and impressions were taken from this in clay or sulphur. The black substance used was called *niello*; and hence the name of the art. The same process was also used when pieces of armour, household plate, and other articles were engraved for the purpose of being inlaid with metals, wood, or ivory. Painters were employed to make designs for this kind of engraving, and impressions were taken in clay or sulphur, both for the convenience of the artist as he proceeded in his work, and for distribution among his friends. It occurred to Finiguerra, that the impression might be made on paper instead of clay; and he proceeded to make the experiment, wetting the paper and applying it gently with a roller. Impressions are still preserved in some of the museums of Italy, taken upon paper, and easily recognised by the inscriptions being reversed; and the Abbé Zani discovered at the Bibliothèque du Roi at Paris, in 1803, a print entitled "The first impression from an engraving by Maso

Finiguerra in 1452.” Some Italian writers, with considerable show of reason, place the epoch of Finiguerra’s invention as early as 1440, or a short time before.

German writers claim the honor of the invention for a citizen of Antwerp, Martin Schoengaur, asserting that he practised the art before Finiguerra. It seems probable, that it appeared nearly simultaneously in both countries. The earliest distinguished engravers after the discovery of the art, however, were Italians.

It does not appear, that Finiguerra pursued his invention any further than to take impressions on paper instead of clay. A contemporary, of the same profession and city, Baccio Baldini, improved upon the invention by engraving on plates for the express purpose of taking impressions. He was greatly assisted by a distinguished painter, Antonio Pollajuolo, who furnished him with designs for his engravings, and also by another artist, Sandro Botticelli, who made a set of drawings, from which Baldini engraved plates for an edition of Dante, published in 1488, and supposed to be the first book ever embellished with copperplate engravings ; though this notion has been proved false by a German writer.

The works of Baldini attracted the attention of a Roman engraver, Andrea Mantegna, who had already become distinguished as one of the most successful of the *niellatori*. This artist not only assisted Baldini with original designs, but also turned his own efforts to the promotion of the newly-discovered art, in which he soon became a proficient. Roscoe says of him, that his prints display considerable power of invention and expression of character, even bordering upon grace and elegance. The drawing is generally correct, and sometimes exhibits great freedom and spirit. His engravings are distinguished by the shadows being formed by diagonal lines, not crossed as in more recent prints.

In our notice of the early days of the art, we must not omit mentioning Albert Durer, one of the earliest Dutch engravers. Some knowledge of the art seems to have been previously possessed in Holland by Martin Schoengauer, who is thought by some German writers, as we have seen, to have invented it, and who was certainly a contemporary of Finiguerra. The works of Martin, and his disciple Wolgemuth, inspired the genius of Albert Durer, who did much for the improvement of the art, excelling equally on copper and on

wood. Among his most famous works are portraits of the Emperor Maximilian ; of Albert, Elector of Mentz ; of Philip Melancthon ; a full length of Erasmus, who is represented standing at a desk, writing ; a head of Ulric Vambuler, of the size of life ; and a portrait of himself. He also executed a series of engravings on wood, thirty-six in number, representing scenes from the life of our Saviour.

We have mentioned these prints, because they exercised an important influence on the career of a young Italian, who was now successfully cultivating the same art, and who was destined to carry it to a much higher degree of excellence. Marc-Antonio Raimondi was born at Bologna, and studied the art of painting with Francesco Francia. He was early distinguished for his works in *niello*, but seems to have made no attempts at regular engraving until his attention was directed to it by accident. Having taken a journey to Venice, he saw for sale the set of prints, by Albert Durer, representing the life of our Saviour. These prints were held in high estimation, and sold at a very great price ; but the young artist was so much tempted by them, that he could not refrain from the purchase, though it completely exhausted his funds. In order to repair his fortunes, he immediately began to make copies of Durer's pieces, which he executed with so much success in copper, that he was able to sell them in Venice, as originals by Durer. The latter, as Vasari tells the story, in his "Lives of Painters," on hearing of the fraud, immediately repaired to Venice, and complained to the Senate of the injury ; but obtained no other satisfaction, than a decree forbidding Marc-Antonio from affixing to his prints the name or emblem of Durer.

From Venice, Marc-Antonio went to Rome, where he had the good fortune to become acquainted with Raphael, who was then residing there. Having made an engraving from Raphael's Lucretia, he caused it to be shown to the artist, who immediately perceived the great advantage which he should enjoy by means of this invention, in having his works spread over the world ; and from this time Antonio found his chief occupation in copying the works of this great master, receiving from him many useful hints and directions, so that the art was greatly improved by his labors. His reputation was soon established throughout Italy, and his school was resorted to by numerous disciples ; among whom were Marco da Ravenna, Agostino Veneziano, and Giulio Bonasone, who

were almost as accomplished and successful as their teacher, and did much to improve the taste of Europe.

The art was thus firmly established in Italy and in Holland. The first kind which was practised was the *line engraving*, as would naturally be supposed, when we remember the origin of the invention. And it is worthy of note, that, although many other ways have been adopted for cutting the copper, the earliest method is still used for the most costly and elaborate works. A short account of the different modes of engraving may not be uninteresting to our readers.

The principal instruments, used for line engraving, are the *graver*, the *scraper*, the *burnisher*, and the *steel point*. The *graver* is a piece of hardened steel, four or five inches long, having four sides, and varying from three sixteenths to one sixteenth of an inch in thickness, the sides forming a right or acute angle according as the lines are to be cut bold or delicate, and is cut off obliquely at the end to give a sharp point at one of the corners. The handle is of wood, or cork, shaped somewhat like the handle of a common screw-driver, but much shorter. The *scraper* is a long, triangular piece of steel, regularly diminishing from the handle to the point. The three edges are kept sharp by rubbing them on an oil-stone, and are used for removing the *burr*, or roughness occasioned by cutting the plate with the graver, and also for erasing erroneous lines. The third instrument is the *burnisher*, which is a hard, round, and highly polished piece of steel, used for rubbing out any little dots or scratches which occur in the copper. The *steel point*, set in a wooden handle, is also used for etching, and for some of the delicate work, technically called *dry-pointing*, which the graver could not so well be made to perform.

The present usual process for line engraving is as follows. The plate, being properly prepared, the work is commenced by what is called *etching*, which is thus performed. The plate is covered with a thin ground or varnish, composed of asphaltum, gum mastic, and virgin wax. If an outline in pencil is to be transferred to the plate, the pencil outline is laid carefully upon a clean paper, and thoroughly sponged with water upon the back, and then placed between damp sheets of paper for a few moments. The outline is then again sponged in a similar manner; and this is repeated until the paper becomes completely saturated with water. It is then laid upon the plate



on which the ground is, and rolled through a plate press ; and an inverted pencil outline is thus produced upon the plate. If the drawing is traced, it is done either with a pencil upon transparent paper, and then transferred as above, or upon tracing-paper with the point ; which tracing-paper, after tracing, is rubbed with red chalk, then laid upon the plate, and the tracing lightly gone over with the point ; thus producing upon the plate an inverted outline in red chalk. Different kinds of tracing-paper are used for these different processes. The outlines, and such parts as require freedom and irregularity of line, and the main lines of the dark drapery, &c., are then marked through the ground, care being taken that every line shall penetrate to the copper. The edges of the plate are then surmounted by a high border of wax, closely fitted, and a dilution of the best spirits of *aqua fortis* and water is poured over the whole. The acid of course reaches the metal wherever lines have been drawn through the wax, and the bubbles of air produced by the chemical action, together with the saturated portions of the metal, are brushed away with a feather. For biting steel several other kinds of acid are used ; for very soft steel, powdered corrosive sublimate and alum, dissolved in water ; for hard steel, nitric acid diluted, the plate, before the acid is applied, being washed with a decoction of nut-gall. When the action of the acid has been continued long enough, the liquid is poured off, and the operator examines his work carefully. If he finds that the desired effect has been produced in the lines drawn, he fills them up, or, in the technical language, they are *stopped out*. The *biting*, or action of the acid, is then continued for the deeper shades, which are afterwards stopped out, and so on. When the work is completed, the varnish is cleaned off, the plate washed with oil of turpentine, and any deficiencies are remedied with the graver. The plate is then finished with the graver and the dry-point, and by *rebiting*, which last is done by laying a ground upon the surface of the plate, so as that it shall not penetrate the lines, and then biting as before, or washing on the acid where any part is wished darker. From this description, it may be seen how much of the beauty of the work depends upon the skill of the artist in using the graver. Indeed, this instrument seems to possess scarcely less power than the pencil or the chisel. Within its compass are contained

all that art can convey of delicacy, grace, beauty, and power.

This practice of etching must have been very early adopted, as it is extremely probable that acid was used by the manufacturers of swords and other warlike implements, in decorating blades and other weapons, before the invention of engraving on copper ; and its adaptation to this purpose would have been readily perceived. The merit of inventing etching was claimed by an Italian artist, Parmegiano ; but it is ascertained, that it was earlier practised by Albert Durer, from some prints by that artist, bearing the dates of 1518 and 1524.

For letter, map, and plan engraving, the process is as follows. The plate, being carefully prepared to receive the cutting, is warmed sufficiently to melt white wax, with a thin coating of which it is then covered. The outline of the drawing is then traced upon paper with a black-lead pencil, and laid, the pencilled side downward, upon the wax, and the back gently rubbed with the burnisher ; by which process the drawing is transferred to the wax. The engraver is thus guided in making the outline of the design on the copper, which he does by means of the point above mentioned, penetrating through the wax, and marking distinctly on the plate, or by cutting directly through the wax with the graver. The wax is then wiped off, and the plate finished with the graver and point. The plate must be laid upon a strong, steady table, and a sort of awning or shade of silk paper stretched on a frame be placed near the window, in such a manner as to prevent a glare of light from falling upon the copper. Whenever an erroneous line is made by the slipping of the graver, or other cause, it must be effaced by the burnisher, and the indentings which this leaves must then be levelled with the scraper, rubbed with charcoal and water, and lightly polished with the burnisher.

The second kind of engraving, which is done by making dots in the copper instead of lines, is called *stippling*. The principal advantage of this style is, that delicate parts of the engraving may be done with less labor and in a shorter time. It will readily be seen, that, the greater the number of the dots, and the closer they are together, without being so near as to form a continuous line in any direction, the more will the work resemble a crayon drawing. On account of this

resemblance, stippling is, in England, commonly called chalk engraving. It is often found united in the same piece with line engraving, being employed for the more delicate parts, while the drapery, and all the bolder portions of the work, are represented in lines. An instrument has been invented by which this kind of engraving may be more expeditiously accomplished. This is called a *roulette*. It is a toothed wheel attached to a handle ; and, being rolled over the copper, it makes a row of dots. The effect of this, however, is much inferior to the dotting made by the graver. *Stippling* is a very ancient invention, and is attributed to the Italians. It is known to have been used by Augustine of Venice, who, as we have already mentioned, was a pupil of Marc-Antonio ; and there is still preserved a print executed by this artist, representing an old man seated on a bank, with a cottage in the background. The flesh only, however, is done in dots. There is also another print of a single figure standing, holding a cup and looking upwards, by Giulio Campagnola, who engraved in the early part of the sixteenth century. The background is executed in round dots, apparently made with the needle or dry point, and the figure is outlined with a deep stroke and finished with dots, the hair and beard being executed in lines.

The third style of engraving is the *mezzotinto*. The plate, being prepared, the process is commenced nearly in the same manner as for line engraving, the outline and bolder parts being etched. The plate is laid on a firm table, which has a flannel cloth upon it to prevent the copper from slipping. An instrument called a *grounding-tool*, provided with teeth, is then applied to the plate, and rocked backwards and forwards in every direction over its surface, so as to cover it with fine indentations, care being taken not to allow the tool to cut twice in the same place. When this operation is finished, the plate is found to be so engraved that an impression from it would present a uniformly black surface. The engraver now resorts to the scraper and burnisher, and presses down or rubs out the roughness of the copper, over that part of the surface where the figures are to appear, obliterating the ground for the lights and leaving it for the shades. Great care must be taken in this part of the operation, to make the gradations from shade to light extremely deli-

cate, as, otherwise, the effect of the piece would be much injured. While speaking of mezzotinto engraving, it seems worth while to correct a prevalent error. It is generally supposed, that an acid is employed to corrode the copper for this branch of art ; but this is not the case. Engraving, when acid is to be used, is called *etching*, a process which we have already described.

This mistake with regard to the use of acid in mezzotinto, may not improbably have grown out of the commonly received account of the invention of this style of engraving. The merit of first using it is attributed to Prince Rupert. Horace Walpole, in his "Catalogue of Engravers," digested from the manuscript of Vertue, says, that, as Prince Rupert was going out one morning from his residence at Brussels, he observed a sentinel very busy with his fusil. On inquiring what he was doing, the man showed him, that the night dew had made some spots of rust on the piece, which he was trying to scrape and polish away. On examining it, the prince perceived something like a figure eaten into the barrel, with innumerable little holes close together like the chased work on gold and silver, part of which the man had already scraped away. It immediately occurred to him, that, by covering a plate with such little holes, so that it would give a black impression, and then scraping away part of them, the smooth portions of the plate would leave the paper white. He communicated this idea to Vaillant, a painter whom he maintained ; and after many experiments they contrived a steel roller with teeth, which could cut the plate in every direction ; and it was then easy to scrape away the roughness where the light was to fall.

This account, however, seems to be incorrect ; for the Baron Heineken, in his "Idée Générale d'une Collection complete d'Estampes," speaks of a print engraved in mezzotinto by Colonel de Siegen, an officer in the service of the Landgrave of Hesse. It is a portrait of Amelia Elizabeth, Princess Regent of Hesse-Cassel, which is inscribed in one corner, "L. de Siegen, inventor, fecit, 1643." Now it does not appear that Prince Rupert pretended to have made this discovery till nearly twenty years after the date of Siegen's print ; for Evelyn mentions, in his Diary, under March 13th, 1661, that Prince Rupert had just shown him the

*new way* of graving called *mezzotinto*. Heineken thinks that Rupert must have learned the art from Colonel de Siegen.

Another mode of engraving, accomplished by the help of an acid, is called *aqua-tinta*. The outlines of the picture are etched in the copper by the usual process. The ground is then removed, the plate carefully cleaned, and the *aqua-tinta grain*, as it is called, is applied. In the old method, this consisted of finely-powdered mastic, sifted carefully and equally over the plate, and then made to adhere by gently warming it. It will readily be seen, that, were the acid now applied, it would so act upon the copper between the innumerable fine grains, that an impression taken from the plate would be perfectly black. When the grains of mastic, therefore, have been made to adhere, the artist takes a hair pencil dipped in black varnish, and paints over the grain in those parts of the picture which are to be left entirely white. The acid is then applied, and after it has been suffered to act long enough it is poured off, and the next lightest shade stopped out; again, the acid is applied for the deeper shades, and so on till the picture is complete. There are several modifications of the process of *aqua-tinta* engraving, which we omit describing, as it would be difficult to make them intelligible to our readers. One, however, invented we believe by Mr. F. Tukes, of London, and now generally adopted, ought not to be passed by. It is far preferable to the method formerly in use, wearing longer, and giving a grain of much more elegant appearance. The resinous substance to be employed, which is mastic, resin, burgundy pitch, or a mixture of two or more of these ingredients, is dissolved in highly rectified alcohol; and, the plate having been carefully cleaned, the solution is quickly poured over its surface, in such a manner, that the chilling of the varnish, which immediately takes place, may be perfectly equal over the whole. If this is well done, the rapid evaporation of the alcohol causes the resin which it has held in solution to shrink up, presenting a sort of vermiform appearance, and leaving the copper between the particles of varnish open to the action of the acid. The object of the *aqua-tinta* is to imitate drawings made with India ink, bistre, sepia, &c. It is well enough adapted for slight subjects generally,

and for large and coarse representations ; but it fails, where minute and accurate detail is required.

We come, finally, to the art of engraving *on steel*, which has additional interest to Americans as the invention of one of their countrymen. Though there is reason to believe, that five or six of Albert Durer's prints, preserved in the British Museum, were taken from steel plates, and though there is an engraving by J. T. Smith, in 1805, of the ceiling of the Star Chamber in the "Topographical Illustrations of Westminster," undoubtedly taken from a steel plate, the art nevertheless does not seem to have been appreciated or understood till several years afterwards. In the year 1818, an inquiry was instituted, respecting the prevention of forgery, by the "Society for the Encouragement of Arts," in London ; when it appeared from information gathered by the committee, that bank-notes, with ornamented borders, printed from steel plates, were actually in use in America ; and a specimen of engraving on soft steel, was presented to the Society by Mr. Charles Warren. Soon after this, Messrs. Perkins and Fairman removed to London, and formed a connexion with Mr. Heath, an eminent engraver, for printing notes and other designs from steel plates. The great principle in this branch of the art is, to engrave on soft steel and harden it afterwards ; and the superiority of this kind of engraving, over that on copper, consists in the greater number of impressions which may be taken from steel plates, and the superior delicacy of which they admit in the execution.

In addition to this, Perkins has resorted to another method for increasing the number of impressions. The plate being engraved and hardened, the impression is transferred in a spring press to a cylinder of soft steel, by rolling the latter over the plate several times, under a great pressure. The design is thus transferred in relief to the cylinder, which is then hardened, and may be used to make the same impression on plates of soft steel, or copper, from which prints may then be taken. This process, however, is only used in the preparation of plates intended for bank-notes and calico-printing. The ordinary engraving upon steel, which has now almost entirely superseded that on copper, is executed upon plates nearly decarbonated. They do not require hardening, as they will give a sufficient number of impressions without it.

There is a species of engraving on copper called the *medallic*, which has been invented within the last twenty-five years, and is so beautiful a branch of the art that it merits a minute description. The object of this kind of engraving is, to give accurate representations of medals, coins, and basso-relievos of a small size ; and it is effected by applying a machine to the surface of the medal, which will trace a line on the copper corresponding exactly to the outline of the figure on the medal. Those who are familiar with a pentagraph will be able to form an idea of this machine. It is so contrived, that, as it slides over the surface of the coin, every elevation or depression which produces a perpendicular motion in the machine, causes at the same time a horizontal movement at the other extremity, which traces the line on the copper. Every time the machine passes over the coin, a single line is traced on the copper ; and there is a delicately contrived screw, by which the machine may be pushed forward after each line is drawn, so as to make the next line as near to it as the operator chooses. The effect is to give an exact copy of the medal ; and the drawing appears so salient, that we can hardly convince ourselves, at first, that we are looking upon a flat surface.

This beautiful machine will seem the more interesting to our readers, from the circumstance of its having been invented in this country. In the “*Journal of the Franklin Institute of the State of Pennsylvania*,” (Vol. X. No. 3, for September, 1832,) we find some account of the invention, in the following passage ;

“ In 1817, by the use of a machine which had been invented in Philadelphia, Christian Gobrecht, die-sinker, produced upon copper an engraving from a medal having upon it the head of Alexander of Russia ; from this engraving impressions were taken and distributed. One of these impressions we have seen.

“ In 1819, Asa Spencer (now of the firm of Draper, Underwood & Co., bank-note engravers) took with him to London a machine of the kind above alluded to, which was principally designed for straight and waved-line ruling. This machine was used in London during the year just mentioned, and the mode of ruling waved lines, and of *copying medals*, was then exhibited and explained by Mr. Spencer to several artists,” &c.

In the above extract it will be observed, that we are not expressly informed who was the inventor ; nor do we find it stated anywhere in the communication from which the extract is taken. We have been informed, by numerous artists in Philadelphia, that the contrivance of this ingenious and beautiful machine is undoubtedly to be ascribed to Mr. Spencer ; that the machine used by Mr. Gobrecht was constructed by him, and that, consequently, the invention and perfection of the apparatus are the result of his ingenuity.

This branch of the art has received great attention both in England and France. Mr. Bate of London, took out a patent for a machine of this kind, in 1826, and has distinguished himself by the beauty of his medallie engravings. In 1830, a mechanician of Paris, Achille Collas, contrived a similar instrument, having taken the hint from a machine which was used for engraving watch-dials, cases, and snuff-boxes, called the *tour à guillocher*. And in 1834, a publication was commenced in Paris, under the title of “ Trésor de Numismatique et de Glyptique,” which has been published weekly ever since, each part containing four folio plates of medallie engraving, and a sheet of letter-press.

We have treated of the merely mechanical part of engraving. A much more difficult subject remains for us in the consideration of this art in a more extended sense ; its various objects and capacities ; the results already produced by it, and the rules which may be deduced from the specimens already before the world for the aid of future artists. It must be remembered, that art exists previously to all rules. It springs up first in the inspired mind, is afterwards visibly displayed, then admired, studied, and commented on. While an art is still in a progressive state, it is obvious, that its nature can only be partially discussed. It may possibly be so far advanced as to indicate with certainty all that it is capable of being made ; but even then, the effect to be produced by this perfection cannot be entirely comprehended. And, if the progress made is less than this, it would certainly be undertaking too much, were any one to attempt to give a satisfactory account of the whole extent of the art.

Now the latter appears to be the case with engraving. We certainly cannot say, that this art is still in its infancy ;



for many of its most important objects seem to be accomplished, and the results produced are sufficient to place it among the most beautiful arts. But it is still in a state of progress. Every year witnesses improvement ; invention is continually bringing something new to its aid. The power, flexibility, delicacy, and passion of the art seem to be yearly increased. While this is the case, we should be wrong in attempting to speak of it as we would of painting, sculpture, or any art which appears to have arrived at the fulness of perfection. The most that we can do, is, to examine what has already been effected ; to deduce rules from the art as it actually exists ; to examine its objects, and the extent to which they have been accomplished ; and to form a conjecture, from what has been already attained, of its capacity for still greater improvement.

We shall consider engravings as divided into two great classes ; those which are copies of the works of other artists, either paintings or designs in pencil, and those which are designed as well as executed by the same individual. Between these two classes there are great and important distinctions. The copying of the paintings of great masters implies a distinct talent of a high order ; the power of comprehending and appreciating their style, and their various merits and defects, and of representing them by means of the graver. Copying from designs made for the engraver requires perhaps the least degree of talent. Yet even in this there is no small room for the exertion of ingenuity and taste. But in those works in which the same hand designs and sculptures, there may be merit of the highest order which the art admits ; as these prints bear only the impress of one mind, which is capable of invention as well as imitation ; which conveys its own fire, and gives its peculiar characteristics to the work.

In treating of the first class into which we have divided engravings, the first remark is, that the engraver does not here hold immediate converse with nature. His landscapes do not require him to have seen the country ; and he needs no models for his forms and his countenances. Perfection, or accordance with nature, is not the legitimate object of this branch of the art. His purpose is to convey to the plate the peculiar characteristics of the original ; even faults are not to be softened. It has been remarked by an ingenious writer, that engraving is the translation of painting ; because

the work of representing, by engraving, the ideas of genius which are expressed in the language of painting, is analogous to that of expressing in a foreign tongue the thoughts of a writer uttered in his own language ; and the change which the conceptions of a painter must undergo, in being transferred from the glowing canvass over which the brush has swept, to the dotted, lined, and colorless print, is similar to the modification which takes place in the ideas and figures of a poet, when they are made to conform to the idioms and genius of a foreign language. The analogy, however, is not complete, because painting is a universal language ; it needs no translation to make it understood ; and engraving does not render it more intelligible to any one. In one sense, that is, in the power of multiplication, engraving bears the same relation to painting, that printing does to the manuscript ; but here again the similitude fails, because the printer has nothing to do with copying the forms of the manuscripts ; he is guided by words and thoughts, but not by forms. Perhaps the best way of expressing the relation, which subsists between the two arts, would be to call the engraver the herald of the painter. In one solitary spot of the wide world stands the inspired work, the masterpiece of art, the legacy of genius to kindred spirits in after times. The hand that traced those magical lines has long been cold in death ; the eye that gleamed with inspiration on the work is closed, and the spirit that designed it returned ages ago to God who gave it. This miracle of art, preserved perhaps in the inner sanctuary of some royal gallery, enshrined within its costly temple, and valued beyond price, — more precious from the consideration that its beauty and glory are solitary, unrivalled, and never to be replaced if lost, — can be gazed on but by a few favored mortals. It is a holy oracle of art, and many who would consult it must go a long and weary pilgrimage before they can reach the shrine. But the voice of inspiration has gone forth, and there are prophets to catch the sounds, and herald them abroad over the wide world.

To this high office the engraver is devoted. He is the herald of the painter. He speaks in language less gorgeous, less imposing, less powerful, than the great original ; and he only speaks more intelligibly, inasmuch as his language requires a smaller reach of intellect and taste to comprehend it. But it is his province to address the whole world ; in every

land is found his eloquent proclamation of the great truth (for surely every masterpiece of art is such), and in every land is seen his name, proudly honored in being inscribed by the side of his great master's, beneath his work.

We have said, that the engraver, who is devoted to copying the works of painters, holds no converse with nature. The remark, however, was made without any intention of depreciating this branch of the art. On the contrary, we deem this one of the noblest objects which the engraver can pursue. It is not to be placed on a level with copying in painting, for it implies, we apprehend, the exertion of a higher order of talent, that of doing justice in one art to the works of masters in another. The engraver from paintings is in a high degree an originator. We should certainly assign to the translator, who clothes his work in the language of melodious and high-wrought poetry, and at the same time gives a faithful representation of the thoughts, images, and style of the original, a much higher place than to him, who gives only a plain but literal version, in prose or in poetry, which bears no stamp of the translator's own mind, and adds nothing to the literature of the language. For example, Coleridge's translation of "*Wallenstein*," while it gives a faithful representation of Schiller, is at the same time a beautiful English poem, a positive and precious addition to the literature of our language. Cowper's translation of Homer is also a poem; and a tolerably literal version; but it introduces us to no acquaintance with the translator. We might read whole libraries of such poetry, and yet feel that we have gained no insight into his character. Now we should liken a well-executed engraving from a fine painting to a translation such as Coleridge's; while a mere copy in oils is more like the translation by Cowper, literal and exact, but bearing the impress of no mind but that of the original artist.

Though the engraver from paintings does not hold immediate intercourse with nature, his province is still wide enough to satisfy the demands of genius. He enters upon an ideal world, and holds converse with beings of more than earthly beauty. He is dwelling in the groves and bowers of Eden, or amidst the gorgeous scenery of a world gone by. His firmament is lighted up with hues that seem to be poured down from heaven, and his clouds are tinted with splendors which even the golden west cannot vie with. His eyes are

blest with visions of loftier worlds, and forms surpassing human. Before him is spread out the sea

“Of jasper, or of liquid pearl, whereon  
Who after came from earth, sailing arrived  
Wafted by angels, or flew o’er the lake  
Rapt in a chariot drawn by fiery steeds ;”

and that wondrous stairway,

“Ascending by degrees magnificent  
Up to the wall of Heaven,”—

which the angels are traversing. The venerable forms of saints and martyrs, the celestial beauty of the Holy Mary, the grace, and dignity, and majesty of classic heroes and virgins, are around him to delight, elevate, and inspire.

In choosing the peculiar style of engraving to be used in copying the works of the masters of painting, there is great room for the exercise of taste. For dignified historical pieces, we should have no hesitation in choosing line engraving ; for landscapes the mezzotinto may be used with good effect ; where extreme delicacy is required, stippling may be resorted to. But line engraving seems to us most worthy of the attention of the artist, as it possesses greater power and compass than the other modes. Lines seem to possess, in the highest degree, the capacity of expression, as is abundantly demonstrated by outline engravings ; and they certainly give a more accurate notion of pencil-drawing than stippling. Accordingly we find, that the greatest masters of the art have been in the habit of using this style in their choicest works. Morghen, we believe, always resorted to it, and it is the favorite style throughout Italy. Gmelin, a German artist of great eminence, used line engraving for his copies from the landscapes of Claude Lorraine. Woollett always preferred it, and most of the eminent British artists of the present day resort to it.

Of the fitness of line engraving to represent all the varieties of landscapes, there can be no doubt. One or two examples of very different kinds of landscapes will illustrate this position. We will endeavour to select from those which may be familiar to most of our readers.

Let us suppose that the scene to be represented is of a wild, mountainous, and sublime character ; as, for instance, that beautiful engraving in Rogers’s “Italy,” by Smith, of the passage of Hannibal over the Alps. The lines, with the exception of a small portion of the foreground of the picture,

are mostly drawn perpendicularly, and, where the shading is deepest, cross each other but little. There is an exquisite delicacy in the work, and yet a degree of simplicity which does justice to the sublimity of the scenery. The stern grandeur of the mountains, rising to the skies, and losing themselves in the clouds, is admirably represented, by the very springiness with which the lines are drawn, and their extreme tenuity, as they fade into the white. The effect of long perpendicular lines, not deeply drawn, and fading in the misty distance, is very striking in such a scene. The same kind of engraving is equally well adapted to convey the idea of grandeur and sublimity in architecture ; as may be seen in the engraving by Goodall, in Rogers's "*Poems*," of the interior of a Gothic church, where the lines, being drawn in the manner we are describing, give an idea of vast height, and convey in a wonderful manner the feeling universally inspired by this noble order of architecture.

In proportion as the landscape becomes more complicated, and includes a greater variety of objects, such as forests, lakes, rivers, cataracts, houses, animals, and, above all, foliage and grass, the engraving becomes less simple and uniform. The lines are much shorter, cross each other in a greater variety of angles, and are altogether more complicated and elaborate than in representing the bald, stern grandeur of mountainous scenery. For illustrations of our remarks, we need not look further than the beautiful books to which we have already referred. On the twelfth page of the "*Poems*" is a vignette, engraved by that admirable artist, Goodall, which, for lightness, delicacy, and grace, is not surpassed. It represents an English rural scene ; a rising ground, shaded by a rich tuft of trees and bushes ; a few gypsies at the foot of the hillock, their fire kindled underneath the emblematic cauldron, and their scanty wardrobe displayed on the line hard by. In the background is a windmill. Over this gentle scene the parting sun is pouring his mellow light, and his rays, reflected on the clouds, shoot out that long, fanlike splendor, which constitutes the most gorgeous sunset. The contrast between such a scene as this, and the rugged grandeur of the Alps is complete ; and, accordingly, we find a very different style of engraving used to represent it. The lines are short, delicate, and running in every possible direction, though not apparently crossing each other much. The sky is formed

with horizontal lines, which fade and are lost in the full light, where the sun's rays extend upward. The mill, it will be observed, is represented by simple perpendicular lines.

We have mentioned these two engravings as being specimens of strong contrast in landscapes. For all the different varieties of scenery, there must be corresponding modifications in the style of engraving resorted to. It may be suggested to us, that such remarks are superfluous ; that we are only laying down rules, that common sense and the smallest share of taste would readily dictate. But, even granting this to be true, we still deem the remarks of some value, as demonstrating the power and capacities of line engraving. A landscape may be done in mezzotinto, or it may be represented by aqua-tinta ; but we have given these two instances of landscapes to show the power of lines in representing scenes of an opposite character.

These engravings, it will be noticed, are made from drawings, not from paintings. But the principle is just the same. The two landscapes illustrate this power of line engraving quite as well as if they had been taken from that fine piece of David's, Napoleon at the foot of the Alps, or from one of Wilson's rich compositions.

The power of lines will be more fully comprehended, when we ascend to the higher branches of the art, that is, copies from historical paintings, and particularly the representations of countenances. It is a fact, which we presume none will dispute, that lines produce different effects upon us, accordingly as they are differently drawn. So universally, indeed, is this principle acknowledged, that by general consent the term *line of beauty* is agreed upon to express a particular motion of the pencil. Upon this single principle an extensive theory is founded, with regard to the art of linear engraving. Why it is, that lines differently drawn produce in us different emotions, why a regular curve is more agreeable than a straight or angular motion, why free and swelling lines afford more ease to the eye than abrupt or unvarying ones, we do not pretend to say. It is one of those questions, to which the only answer is, We are made so. It is the same with our other senses. No one can tell, for instance, why some combinations of sounds produce agreeable emotions, and others the contrary ; why some make us feel joyful, and others sad. Neither can any one give a reason for the fact

that the perfume of the rose is more to our taste than that of the poppy or the onion ; or why sweet tastes please, and bitter disgust us. The same is the case with lines ; some please, others offend, the eye. And besides this distinction, we may observe, that, of those which are agreeable, some produce one kind of emotion, others another. Horizontal lines in drawing affect us in one way, perpendicular lines in another. Lines curving upwards affect us differently from those which bend in the opposite direction.

It will easily be perceived from these remarks, that line engravings have, in some degree at least, the power of conveying the style of different painters. A skilful engraver would use, of course, different styles for different subjects. For one of Fuseli's fiery compositions, for instance, his lines would not be the same as for a Holy Family by Raphael. Where the hand of any great artist is easily recognised by the peculiarities of his style, it is not very difficult to convey these peculiarities in the engraved copy. None who is familiar with the works of Raphael would find much difficulty in recognising his style in a good engraving, even without having seen the original of the identical piece.

But the question occurs, whether a different kind of line is not to be used in copying from different artists, even supposing them to have been engaged on the same, or similar, subjects. Should not a difference be made in engraving, for instance, a Madonna of Raphael's, and one by Titian ? We have no hesitation in asserting, that there should be ; if the Madonna of the one artist produces different emotions from that of the other, then different kinds of lines should be used in engraving them, corresponding to these various emotions. There is a delightful chapter in Mrs. Jameson's "*Diary of an Ennuyée*," upon the Madonnas of the various great masters of Italy, in which, with a fine discrimination, she traces the different emotions which these paintings express and excite, and compares the work with the individual traits of the author. Now we are of opinion, that, for all these, there should be corresponding differences in engravings from them. The pure and celestial countenances of the Virgins of Raphael, with their mild, pensive, twilight radiance, would not be well copied by the same class of lines that would be used for the full-orbed, passionate beauty of the Madonnas of Titian ; a Holy Family by Poussin would be represented by different lines from those used to copy a Holy Family by Andrea del Sarto.

<sup>3</sup> This science of lines appears to be yet only in its infancy ; and, indeed, the whole amount of linear engraving, from its first discovery up to the present time, is only a series of experiments which may serve as the beginning of the science. To all artists who have a real love and respect for their profession we earnestly recommend the subject ; for we are convinced that the careful study of it, with the proper objects, would lead to a more rapid improvement in the art of engraving than has ever yet been witnessed. The questions to be determined are, What lines are suited to express the different emotions ? What are the different styles to be used in correspondence with the style of the original paintings ? Can the style of each great master be made distinct in the engraving ? Can any variety or combination of lines convey a notion of the coloring of the various artists ? A careful examination of the different engravings, from the early days of the art up to the period of the most perfect specimens, would perhaps lead to a satisfactory answer to some or all of these questions. But, above all, were the study made by an artist with the graver in his hand, and the copper before him, to test by experiment the principles of the science as they would be developed, the result might prove of the highest benefit to the art.

*Outline engravings* constitute a distinct, and, of late, an important department of the art. The principal works in this branch are the designs of Flaxman, engraved by others ; and those of the brothers Riepenhausen, and of Retzsch, engraved by themselves. The beautiful illustrations of Flaxman are probably known to most of our readers. They consist of drawings from the Iliad and Odyssey, from the Theogony of Hesiod, the Tragedies of Æschylus, and the Divine Comedy of Dante, besides a restoration of the shield of Achilles as described in the Iliad. The great merit of Flaxman consists in the power he displays of comprehending and expressing the spirit of the antique. A perfect master of the art of drawing, and an artist in the highest sense of the word, he seemed to have made his dwelling among by-gone men, and to have lived in scenes which have passed away for ever. He made himself, by years of study, perfectly familiar with all the forms of classic life ; and we would recommend his works to the young scholar as one of the most profitable as well as delightful forms under which Grecian antiquities may be studied. Many pages, and even chapters, of



Potter, might be found beautifully condensed and commented upon in any one of Flaxman's drawings from the antique.\*

The works of the Riepenhausens, though inferior to Flaxman in extent and variety, display an equal acquaintance with the antique. Their principal effort is a restoration of the famous paintings of Polygnotus at Athens, from the description given of them by Pausanias. These engravings fill two large volumes, one containing scenes from the capture of Troy, the other from the descent into the realm of Pluto. The works of these admirable Germans deserve to be ranked along with those of the great English artist. Yet the latter undoubtedly evince a wider range of genius. In the illustrations of Dante, Flaxman has shown the power of combining the antique with the Gothic, in the same grand and striking manner in which this union is displayed in some of the majestic architecture of Italy during the twelfth and thirteenth centuries. There is an analogy to be discovered between the semi-classic and semi-romantic poem of the great Tuscan bard, and the sublime cathedrals of Pisa, of Florence, and of Venice ; and Flaxman seems to have been inspired by the same blending of Gothic grandeur and awfulness with classic grace, in his illustrations of the Divine Comedy. The only work of the Riepenhausens besides the classic restoration, is, we believe, that exquisite *fantasia*, the life of Raphael, in outline engravings.

We have no hesitation in placing Moritz Retzsch at the head of all outline engravers, both because we think that the romantic art, in which he excels, requires a higher reach of genius than the classic, and because he displays a greater variety and compass of powers than any artist whose works have ever come within our observation. We shall not attempt an analysis of his works in this place, both for want of room, having already prolonged our essay too much, and because the subject has been most worthily treated in a very interesting article in the London "Foreign Quarterly Re-

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\* Flaxman's illustrations of the Iliad have, probably, been made familiar to many of our readers, by the beautiful edition of that poem, prepared a few years since by Professor Felton. Through the work are interspersed copies of Flaxman's designs, as first engraved, executed in a style which does great credit to the American artist. He has succeeded in conveying the spirited and graceful touch of the original, and at the same time has overcome the difficulty of reducing the illustrations to the octavo size. These engravings have been published in a separate volume, and we recommend them to the attention of our readers.

view." We shall content ourselves with referring to a few of Retzsch's most remarkable characteristics.

In the first place, then, no one can fail to be struck with the wide field which his pencil traverses. In his different illustrations, he seems to have represented almost every variety that human life affords, every passion, every emotion, every event which can most deeply affect the mind or heart. Were the task assigned us of selecting from all the works of Shakespeare, those which should illustrate, most satisfactorily, the wide compass of his powers, we should be disposed to make the choice, that Retzsch has done, of *Macbeth*, *Hamlet*, and *Romeo and Juliet*. It seems as if almost every scene that life, real or fancied, offers, could be found in these illustrations of Shakespeare; the camp, the battle-field, the banquet, the lonely closet, the burning hour of stolen love, the horrid cave where witches boil their hell-broth, and the dim phantoms of kings flitting in noiseless array, — the frowning castle and the torch-lit palace, — all that enters into the composition of human experience or thought, are represented with equal skill, power, and fidelity in these masterly drawings.

Power and terror seem to be but ministering attendants to this wonderful master. His delineations of the Prince of Darkness, though of a different character from Milton's awful picture, are scarcely inferior at times, in sublimity, to the fallen Archangel of our great Epic. In that terrific sketch, "*The Game of Life*," for instance, we discover in the iron frame and the thunder-blasted visage of man's great antagonist, the same being, who in the "*Paradise Lost*" reviles and blasphemes the sun, and glares on the new creation with a feeling of hatred and malice deeper than hell itself. Less sublime, but perhaps even more terrific, are the night-ride of Faust and Mephistophiles on the demon steeds, the maddening interview with Margaret in the dungeon, and the scene in "*Fridolin*," where the Huntsman is thrust into the blazing furnace.

But would we seek the opposite extreme to these hideous sights, let us turn to the "*Song of the Bell*." That exquisite picture well known by the title of "*The German lovers*," seems to concentrate all of life that is peaceful, gentle, and boundlessly happy, when in truth, as the poet has it, "the eye sees heaven open and the heart revels in bliss." Indeed nearly all the illustrations of the "*Song of the Bell*" are of a character very different from most of the works of Retzsch.

They have a pastoral simplicity, gentleness, and repose, to which we turn with pleasure and refreshment, after our souls have been harrowed up by the appalling scenes of his tragic representations. There is less of crime depicted in this than the other works, less of that awful machinery of Hell, which this artist has the power of blending so skilfully with his scenes of life, that we become superstitious as we gaze at them, and are ready to start like those who have heard ghost-stories, fearing that the Great Enemy himself may be at the moment scowling upon us, or some ugly imp leering with eyes of malice upon our motions, or reading our thoughts.

Not less remarkable is the talent with which Retzsch portrays incidents of the deepest pathos ; scenes which combine the air of repose with sorrow so deep and heart-rending, that we feel as if we were gazing on Tragedy herself. Of this character are the representations of Ophelia, when she appears in her wild array of weeds and flowers, of Margaret and Faust, where the latter offers her the potion, of Margaret sitting alone before the spinning-wheel, of the wedding at the friar's cell in "Romeo and Juliet."

A little change, and these smothered passions blaze out with a volcano's fury, and the deep moan of sorrow swells to the maddening cry of agony and despair. Such are the night-walk of Lady Macbeth, the prayer of the king in "Hamlet," and of Margaret before the image of the Virgin, the prison scene of Margaret and Faust, and the parting of Romeo and Juliet in the morning.

With all these great and splendid powers, Retzsch combines a minuteness and fidelity in details, which are not less surprising. Nothing is omitted that can in any way contribute to the effect of a scene ; and, when we have received the general impression which any one of his representations produces, we may spend a long time in the study of the various parts of the picture, in which we shall not fail to discover many beautiful thoughts which greatly enhance the value of the work. There is a fertility and bountifulness in his conceptions, which remind us of the boundlessness of nature. For instance, in the Leipzig edition of the Illustrations of Hamlet, which lies before us, we find that, not content with the splendid array of scenery which he had created to adorn the thoughts of Shakspeare, he has added a picture for the title-page, or the outside cover, of such deep, calm, and sol-

emn repose, that we look upon it after contemplating the heart-rending scenes of the tragedy, with the same emotion that a strain of soft and sad music would awaken. It represents a Gothic tomb or monument, on which is resting the form of Hamlet, composed in the sleep of death. Above, appears the dim visage of the royal Phantom. In Gothic niches, and beneath the overhanging canopies, are seen as supporters, on one side the effigies of the king and queen, their eyes closed in eternal sleep, and a hideous demon extending his claws above them as if to claim them for his own. On the other side, in the same position, and sleeping too in death, are the forms of Polonius and Ophelia. But a cherub is overshadowing them with his wings, and seems to invoke blessings on their heads. On the base of the tomb are seen two swords piercing a heart, and the picture of Hamlet absorbed in prayer. The whole piece breathes an air of solemnity and repose. The thrilling scenes of the drama are over; and the busy actors are sunk to rest. The diadem is now but worthless dross to him that wore it. Poor Ophelia's broken heart throbs no longer. The fiery spirit of Laertes is quenched. The night-walk on the castle platform, the grave-yard philosophy, and the fierce duel, are but a tale that is told; and Hamlet's world-wearied soul, liberated from this mortal coil, has gone to seek that undiscovered country from whose bourn no traveller returns.\*

We had much more to say upon the subject of engraving. A treatise on this subject is incomplete, which does not give the reader information with regard to the best artists both of the present day and of an earlier period in the various countries of Europe. We had intended also to speak of the state of the art in this country, which would have led to some re-

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\* Since this article was prepared, we have obtained Retzsch's fourth work on Shakspeare, comprising illustrations of *King Lear*. The power of the artist does not flag in this most difficult task. The scenes are of a more stirring and high-wrought character than prevails in most of his previous works; and, while he has done justice to the energy with which they were conceived by the great master, he has very skilfully avoided the exaggeration and ranting into which the subject would tend to lead him. We have always thought that the painting of *Lear* by West, in the Boston Athenæum, is marked somewhat strongly with these faults, conveying the idea of *stage effect*. The scene of *Lear* recognising *Cordelia* is, perhaps, the most exquisite in this volume of illustrations. We are almost at a loss to describe the effect produced upon our feelings in contemplating these powerful delineations. Could the storm of agitated, sublime, and frightful dreams, with its occasional intervals of soothing vision, be embodied visibly, it seems as if such forms as these illustrations would be taken.

marks upon wood engraving. Upon this, we will, at present, only observe, that a very excellent essay upon wood engraving appeared in a late number of the "London and Westminster Review"; particularly valuable by being illustrated by specimens. The American re-publishers have had the sagacity to print the essay without the illustrations, which is about as wise as representing the tragedy of Hamlet, with the part of Hamlet left out by particular request.

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ART. V. — *North American Herpetology; or a Description of the Reptiles inhabiting the United States*. By JOHN EDWARDS HOLBROOK, M. D., Professor of Anatomy in the Medical College of the State of South Carolina, Member of the Royal Medical Society of Edinburgh, &c. &c. 4to. Philadelphia: J. Dobson. Vol. I. 1836. Vol. II. 1838. pp. 120 and 125.

WHEN we learned, several years since, that Dr. Holbrook was preparing a complete work upon the Reptiles of this country, we were forcibly impressed with the magnitude of the undertaking, and the difficulties which would unavoidably accompany its prosecution. Aware, however, of his long-continued investigations and indefatigable industry, we anxiously awaited the publication of the first volume, confident that it would be creditable to its author. It more than realized our sanguine expectations. In less than two years after its appearance, a second volume has issued from the press. Invaluable as the work is to the American herpetologist, we regret to find that it has as yet attracted little attention; a circumstance, which makes it the more imperative upon us to express, in some detail, our sense of its great merit.

The first volume opens with a chapter upon the "organization of reptiles," in which the organs of digestion, absorption, circulation, and respiration, together with their physiology, the structure of the nervous system, and of the organs of sense, are treated somewhat at length; and, while the accuracy of the observations will be observed with delight by the scientific naturalist, the clear and interesting manner in which the subject is elucidated cannot but afford to the general reader